

Theses of the Ph.D. Dissertation

A DEMAND AND SUPPLY ANALYSIS OF THE GROUP WORKOUT SESSIONS AS SERVICES OF THE FITNESS SECTOR

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1. RESEARCH OBJECTIVES AND PRESENTATION OF THE RESEARCH HYPOTHESES

The key objective of my research is to look into the fitness sector in terms of both the demand and supply sides, from the aspect of the trainers who work in gyms and conduct group sessions, as well as of consumers, sportspeople using these services. I am aspiring to present a comprehensive picture of the players in the fitness industry, which will lead to consequences regarding what factors are needed to improve the competitiveness of a fitness club and provide for its long-term sustainability. My research also aims to answer how to reach out for the largest possible proportion of the population and inspire them to attend fitness trainings, as it is a scientifically demonstrated fact that increased physical activity contributes to the health preservation of the population, which – on the longer run – results in savings on the burden of disease for the households and the state.

Key Research Objectives

1. Exploration of the training session attendance-related habits of consumers in the Hungarian fitness sector
2. definition of the key driving factors motivating the fitness sector consumers to attend training sessions
3. definition of factors influencing the gym visitors in their choices related to sports facilities
4. study of what personality traits the attendees of fitness training sessions attribute to their trainers
5. qualification of the trainers' sample, as well as the analysis thereof on the basis of the Myers–Briggs personality types
6. investigation of the factors, features influencing the attendance of the specific trainers' sessions
7. comparison of the consumer demand-related results with the characteristics of the supply side

The fundamental hypothesis of my paper is that *fitness service providers can significantly improve their competitiveness by relying on the study of the consumers' motivation, and*

exploration of the key aspects of gym choice, as well as by selecting the proper experts (trainers).

Research hypotheses

H1: Training habits of fitness consumers differs from general populations physical activity. Based on the gym membership active lifestyle is presumable.

H2: The key driving factors influencing the attendance at fitness training sessions are related to health preservation and physical appearance.

H3: In addition to the tangible conditions, the selection among fitness facilities is mostly influenced by the staff, and by the trainers themselves in particular.

H4: From among the Myers – Briggs personality types, extraverted type is more common among trainers than introverted type.

H5: The personality of the trainer (extraverted/introverted) is an influencing factor in the trainer selection of extraverted and introverted types of sportspeople. I assume – in the case of introverted people in particular – that they prefer to opt for introverted trainers whose personality traits are similar to their own.

H6: The training sessions of trainers of extraverted type have higher attendance than sessions held by trainers with introverted personality.

2. RESEARCH BACKGROUND

Fitness industry is an important segment of sports economy worldwide. The number of registered members in fitness clubs has shown a slow, but steady increase (IHRSA, 2015). In Hungary, it is not only the indicators of physical activity that are considered low, but also the rate of sports activities done in fitness clubs. It is timely to conduct a study on the stakeholders of the fitness sector, as gyms offer sports facilities that are available for all, and by exploring the motivations influencing the participation in fitness trainings, a larger mass of people could be reached, and sporting habits could be changed and improved. Trainings are basic services offered by the fitness sector. They have various classifications, however today there is still no uniform systematization available in respect of trainings. Therefore I aim to start my paper by establishing such a model – on the basis of the international and Hungarian literature – that presents the position of fitness within physical activities, as well as the categorization of fitness trainings according to my interpretation (*Figure 1*). Thereafter, according to this model, I will present the key basic concepts related to fitness.

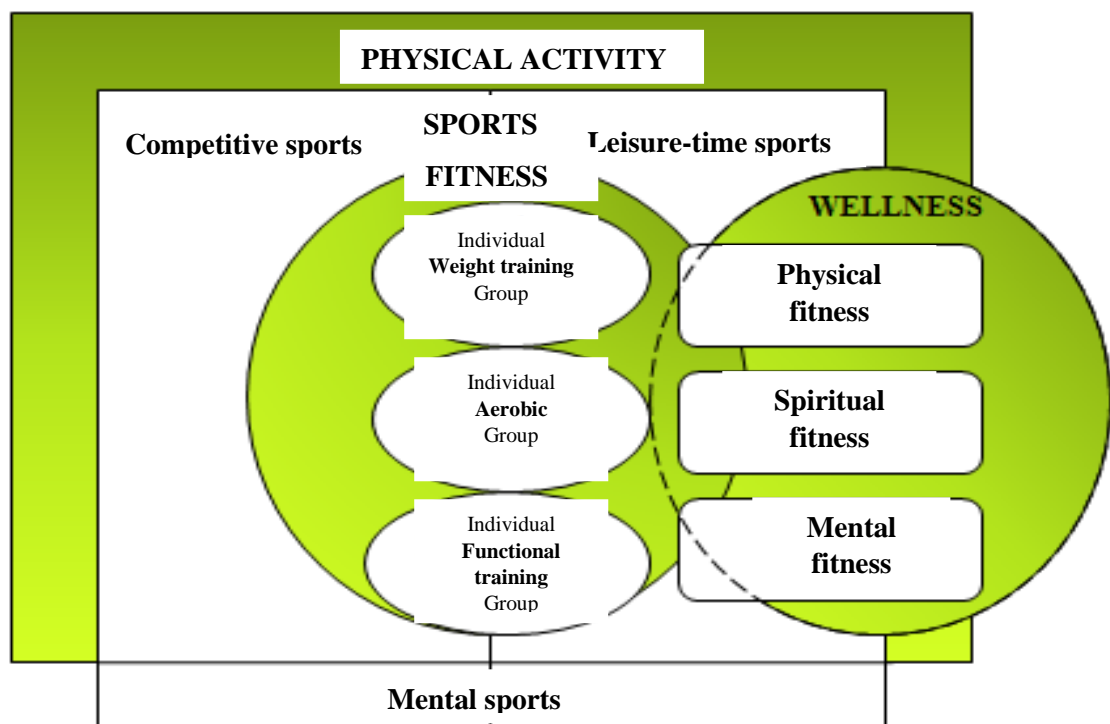


Figure 1: The position of fitness within physical activities

Source: Edited by the author, 2017

On the basis of previous sports definitions, fitness trainings can be defined by the following description: physical activity performed in leisure time, which aims to improve physical

strength, and essentially includes the aspects of entertainment and fostering social relations. The duality characterizing sports is present in the fitness sector as well, since both competitive sports and leisure-time sports are present among fitness trainings. My study focuses on those sportspeople who are engaged in leisure-time sports within the fitness sector.

There is limited literature available on the fitness sector, and they do not include the structural description of fitness. My research focuses on sports services offered to the consumers of the fitness sector. This service is the training, which is a subcategory within the leisure-time physical activities.

Categorization and definition of services may help provide an overview on fitness services, however there is no uniform system available for this purpose, and therefore I used my own categories and definitions for the different training types. I will distinguish among three large groups of fitness trainings according to the training content and the equipment used during the training: weight trainings, aerobic and functional trainings (*Figure 2*). Weight trainings include training forms performed with free weights and gym machines, aerobic include various trainings with choreography performed to music, while functional trainings are based on and utilize the person's own weight, which improve the everyday functioning, functionality of the human body.

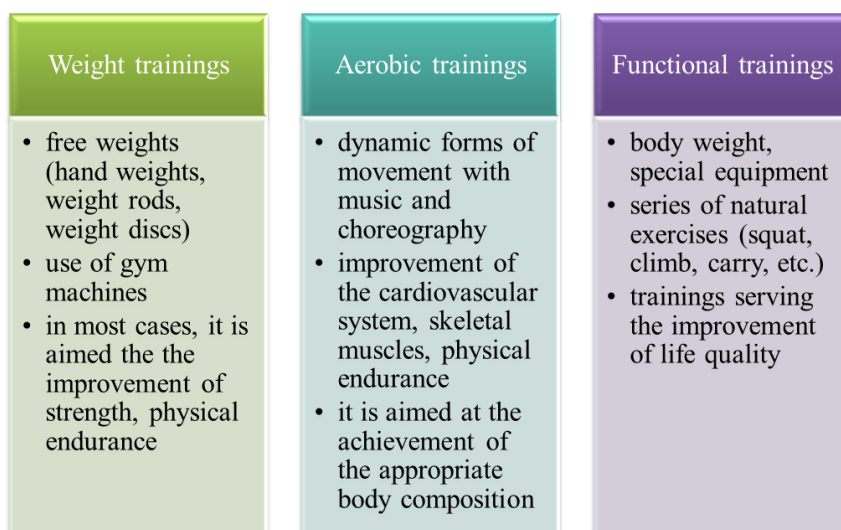


Figure 2: Types of fitness trainings

Source: Edited by the author, 2017

3. APPLIED METHODS AND PRESENTATION OF THE RESEARCH SAMPLE

My research focuses on the fitness trainers who conduct group training sessions, as well as leisure-time sportspeople who attend gym sessions and perform training under the control of a trainer, and therefore the sample may only include people who meet these parameters.

My essay studies the personality and qualification of trainers working with leisure-time sportspeople in the fitness sector, in terms how these factors influence the attendance at group sessions, i.e. their economic efficiency for fitness service providers and fitness centers. My survey also covers the sports habits of leisure-time sportspeople attending to gym.

I am to approach my field of research from the aspects of both the trainers and the sportspeople, and therefore the opinion about the personality and qualification of the trainers has been assessed also among the trainers, as well as the consumers, guests attending to the gym.

On the trainer's side, I looked into the training attendance, the qualification and the personality of the trainers, as well as the interrelations thereof. On the consumer's side, I gathered information on what factors influence the gym choice and what objectives motivate sportspeople to attend trainings, and what role the aforementioned trainer-related interrelation has in the choice, in terms of motivation.

During the preparation of the dissertation I applied secondary and primary data and information collection procedures. In the secondary research procedure, I collected and analyzed the already published international and Hungarian literature.

As my primary research method, I used questionnaire survey among trainers and participants in training sessions controlled by trainers.

3.1. Secondary data and information collection

Secondary data collection is an important part of the research. These data are relatively easy and cheap to access, and provide help, inter alia, for the formulation of the research plan and the more accurate presentation of the primary data (MALHOTRA, 2008). During the secondary research procedures, I defined the key concepts related to the research topic by using the relevant international and Hungarian literary sources, presented the different

meanings and historical background of fitness, as well as the current status and characteristics of the fitness sector. The literature on fitness industry is rather limited, and therefore a part of the information collection was conducted online. Previous studies related to trainers almost exclusively focused on trainers working with professional athletes, however the number and significance of trainers working in the fields of leisure-time sports is rapidly increasing.

With my secondary research, I aimed to provide the theoretical basis for my primary data collection, and use the analyses and research results I had become acquainted with for the interpretation of my own research results.

3.2. Primary data and information collection

The primary research is the data collection that matches the researcher's own research purposes, and it can be qualitative and quantitative (SAJTOS – MITEV, 2007). Its methods include questionnaire surveys, observation, interviews and experiments (LAMPEK – KÍVÉS, 2012). From among the primary research procedures, I used questionnaire surveys. Surveys could be filled in online and on hard copies.

Structured questionnaire survey is a popular method to apply, the data obtained via questionnaires are easy to encrypt, analyze and interpret (MALHOTRA, 2008). As I was planning to ask around 1000 respondents, I opted for using the questionnaire method due to its advantages listed above.

The questionnaires were compiled on the basis of literary sources processed during the secondary research, attempting to align the studied factors with my research objectives and hypotheses. The subject of my study determined the target group of the questionnaires, and as a result the respondents were trainers working in the fitness sector, and leisure-time sportspeople attending to gym, and participating in trainers' classes. I used two different questionnaires for the assessment of trainers and sportspeople respectively. Both questionnaires were available on hard copies and in online format. I opted for online inquiry because I thought in this way my questionnaire can reach more people, in other towns as well, since the number of trainers working in Debrecen is rather limited. Online questionnaires have several advantages in addition to the fact that they are considered a quick and low-cost method. The perceived anonymity of respondents is high, and therefore

there are higher chances to obtain honest answers and eliminate bias caused by the influence of social expectations (MALHOTRA, 2008). The respondents are informed of the voluntary nature of the completion, of its anonymity and the purpose of the survey (FÓNAI ET AL., 2002).

A total of 1014 respondents answered the questions: 753 sportspeople and 261 trainers. Below I am presenting the content of the two questionnaires in details.

3.2.1. Questionnaire for trainers

The questionnaire that was completed by trainers consists of three major parts:

- *General information:* This part includes questions related to the respondent's demographic features (sex, age, residence, education), employment (working hours, form of work, how long has the respondent been working), as well as to the attendance at the respondent's classes (the trainer's popularity, success). This part of the questionnaire (Questions 1–8) included both close- and open-ended questions, questions of ratio, nominal and ordinal measurement levels.
- *Cultural capital:* The professional skills, qualification of the trainers were assessed on the basis of BOURDIEU's (1986) theory of cultural capital. I used separate questions to evaluate the incorporated, objectified and institutionalized cultural capital of trainers. Based on the questions focusing on these aspects, information can be obtained on the trainers' highest sports-related qualification, self-improvement related aspirations, whether or not they participate in training courses, attend professional events, consult with other professionals, use professional journals, books, DVD-s, internet sources to improve their knowledge and provide up-to-date professional information. The cultural capital-related part (Questions 9–14) also consists of close- and open-ended questions, questions of ratio, nominal and ordinal measurement levels.
- *Myers – Briggs Type Indicator:* The third part of the questionnaire focused on the personality of trainers. For or this purpose, I used the Myers – Briggs Type Indicator, which assesses the personality on the basis of its information processing-related characteristics. Dr. Ildikó Takács made this questionnaire available to me, and I used it with her personal consent. Dr. Ildikó Takács has been applying the Myers – Briggs

Type Indicator for decades at the University of Technology, in cooperation with Lajos Izsó for the purposes of career orientation (ERŐS – JOBBÁGY, 2001). As according to the American and British literature, the shorter version of the test – G Form consisting of 94 questions – also provides accurate measurement, however due to its briefness people are more willing to fill it in, I opted to use this version. The use of this method is justified by its excellent applicability in the field of career choice and career orientation (TAKÁCS, 1999).

Presentation of the Myers – Briggs Type Indicator

The Myers – Briggs Type Indicator is a test method created on the basis of C. J. Jung's typology. It is attributed to Katharine C. Briggs and Clarence G. Myers, and its final form was elaborated by Isabel Briggs Myers (TAKÁCS, 1999). The test distinguishes preferences along four dimensions specified by Jung's typology, according to which the tested people can be characterized:

- Extraversion (E) vs. Introversion (I)
- Sensing (S) vs. Intuition (N)
- Thinking (T) vs. Feeling (F)
- Judging (J) vs. Perceiving (P)

People belonging to the different types can be characterized with the following traits:

Extraverted: interested in the tangible and social stimuli, activity-oriented, sociable, characterized by impulsiveness and proactivity.

Introverted: focus on their own inner world, contemplative, reserved, do not like being in focus.

Sensing: focus on stimuli perceivable by the senses, prefer rational, useful, practical things, present-oriented.

Intuitive: prefers deeper interrelations, options, intuitions are important for them, future-oriented.

Thinking: logical, like analyzing and finding cause and effect relations, objective.

Feeling: approach happenings through feelings, tolerant, evaluates humane aspects.

Judging: like planning everything in advance, order and clear-cut limits are important for them, resolute, cautious.

Perceiving: like diversity, take the opportunities, characterized by openness, curiosity and adaptability (MIRNICS, 2006; TAKÁCS,1999).

Using the preferences, the respondents can be classified into sixteen subtypes, as shown in *Table 1*.

Table 1: Sixteen subtypes of the Myers – Briggs temperament index

Sensing	Sensing	Intuitive	Intuitive		
Thinking	Feeling	Feeling	Thinking		
ISTJ	ISFJ	INFJ	INTJ	Introverted	Judging
ISTP	ISFP	INFP	INTP	Introverted	Perceiving
ESTP	ESFP	ENFP	ENTP	Extraverted	Perceiving
ESTJ	ESFJ	ENFJ	ENTJ	Extraverted	Judging

Source: TAKÁCS, 1999. Page 9

From the aspect of statistical analysis (SPSS) classifying the 753 respondent sportspeople and 261 trainers into sixteen subtypes would have resulted in too small groups containing a low number of people of the specific types, which are difficult to assess (and it could cause difficulties during SPSS tests). Therefore, I assessed the occurrence frequency of subtypes only in the trainers’ sample – which I considered of utmost importance –, all the other tests, however, were conducted on groups formed along preference dichotomies.

As this particular questionnaire was designed to ask trainers working in the fitness sector, I tried to reach out directly to this specific target group. The questionnaires were uploaded in online format to a group of fitness trainers in the social media, and furthermore, it was distributed by two Hungarian fitness schools among their own trainers. I finally managed to inquire 261 fitness trainers.

3.2.2. Questionnaire for Fitness Consumers

The questionnaire completed by gym guests cover the following fields:

- general data, demographic characteristics

- training session attendance-related habits
- aspects of gym choice
- factors, objectives motivating attendance at trainings
- questions related to trainers (loyalty to the trainer, opinion about the trainer's professional skills)
- personality of the trainer (according to the personality descriptions of the *Myers – Briggs Type Indicator* manual)
- personality of the sportsperson (according to the personality descriptions of the *Myers – Briggs Type Indicator* manual)
- the sportsperson's willingness to spend on fitness

This questionnaire also included close- and open-ended questions, as well as Likert-scales, which assess the extent of agreement with the relevant statement (KEHL – RAPPAL, 2006). The importance of aspects of gym choice was assessed on a 4-grade Likert-scale in order to avoid the responses from arranging around the median (FÁBIÁN, 2014).

The questionnaires targeting the gym guests were forwarded to the sportspeople visiting gyms in two ways. A part of them received and filled in hard copies of the questionnaire, while others completed it online. Using the snowball method, the link of the online questionnaire was sent to the respondents, who forwarded it among their acquaintances. The questionnaire was filled in by a total of 753 leisure-time sportspeople who attend gym.

During my research I aimed to opt for such methods that ensure the authenticity of my results, and allow to study my field of research from several aspects. The quantitative data obtained from the questionnaire survey were analyzed using SPSS statistical program.

3.2.3. Applied Statistical Methods

During the processing of the data set resulting from the questionnaire surveys, I applied various types of statistical procedures: descriptive statistical procedures and multivariate statistical analysis methods.

I used descriptive statistical methods to study the quantitative results and explore the personal features of the fitness trainers and sportspeople, the training habits of the

sportspeople, the number of attendees at gym classes, as well as the qualification of trainers, and the responses were analyzed by using distribution ratios.

The variables were of nominal, ordinal, and ratio scale measurement levels. In the case of *nominal variables*, the criteria of completeness and mutual exclusion are met, such groups are formed whose members have at least one feature in common, and are distinguished from the members of other groups on the basis of the same feature. Ordinal variables can be ranked according to specific features, and the members of different groups can be arranged into order accordingly (BABBIE, 2003). My research methods were selected in a way that they match the variables of different measurement levels.

The differences of the tested factors were studied on the basis of sex, age and Myers' personality dimensions. I used the *Mann - Whitney test* to study the two-variate group forming criteria, while in the case of multivariate group forming criteria, I applied the *Kruskal – Wallis test* (HUNYADI – VITA, 2006).

For the purpose of reviewing the interrelations between the class attendance and the application of different forms of self-improvement, I used Spearman's rank correlation, which allows to characterize the closeness and direction of relationship between the variables (SAJTOS – MITEV, 2007).

In the crossborder analyses, I applied Pearson's *Chi square test* to look into the statistical interrelations of the categorized variables. The *crossborder analysis* shows the distribution of one or more variables in a contingency table (MALHOTRA, 2009).

Thereafter, I reviewed the data set by using *Cronbach's alpha*. Reliability indicator of Cronbach's alpha tests (CRONBACH, 1951). The value of this was 0.812 in motivation-related questions, and 0.843 in gym choice-related questions. This indicator exceeds the prescribed value of 0.7, and therefore I conducted a principal component analysis test.

In relation to motivation and gym choice, I examined whether the number of the variables applied can be reduced, whether they can be merged into specific factors. For this purpose I used principal component analysis procedure, which facilitates the interpretation of the relationships between variables, in addition to reducing the number thereof, and as a result, they can be applied well for describing populations characterized by homogeneous features (SZÉKELYI – BARNA, 2002). In the case of principal component analysis information loss

is minimal (ÁCS, 2015). By using the principal component analysis, I created six independent components that reflect the gym choices of fitness consumers. The same procedure was applied for creating the dimensions reflecting the key motivators of fitness consumers, which also resulted in six different factors.

I used the criteria of the *Kaiser – Meyer - Olkin indicator* and *Bartlett's test* to determine the number of components. The Kaiser – Meyer - Olkin value specifies whether or not the variables are suitable for principal component analysis, its minimum value is 0.5. Bartlett's test examines the internal link between the variables, if the type I error probability is below 0.05, the variables are suitable for principal component analysis (SZÉKELYI – BARNA, 2002). In my research these criteria were met.

In order to study what groups can be formed from the respondents on the basis of their responses to motivation- and gym choice-related questions, I used *cluster analysis*, for which I applied the principal component variables created. By segmenting the respondents, relatively homogeneous groups were created, whose members are similar to each other and different from the members of other groups in terms of specific factors (SAJTOS – MITEV, 2007).

3.2.4. Presentation of the Sample

The questionnaire survey was conducted in autumn 2017. The questionnaire for trainers was answered by 261 people, while the questionnaire targeting gym visitors was completed by 753 people.

Respondents of the Questionnaire for Trainers

The questionnaire was distributed online among the trainers working in gyms. The registry of professionals working in the fitness sector – as pointed out in the chapter on literature – is not deficient, there is no database available in Hungary, and therefore these people are difficult to contact, their number and their distribution according to socio-demographic features are unknown.

My questionnaire was shared in a group on a community portal including aerobic and fitness trainers, and it was sent to gyms in Debrecen. Many of the respondent trainers forwarded the questionnaire to their acquaintances working as trainers, and two fitness schools

forwarded it to their own trainers and graduate students. Below I am presenting the sample of the respondent trainers in terms of their socio-demographic features.

From among the trainers of the sample, there were 57 men and 204 woman, which is a significant, almost three-fold difference. It can be assumed that on the one hand, the number of women – similarly to many other professions – is higher among trainers conducting group sessions, than that of men, and on the other hand, in the early days of fitness, popular aerobic classes were linked to female trainers, fitness enjoyed the highest popularity among women, trainers primarily came from among women, and this tradition lives on in the field of other group training sessions as well.

In terms of age, the sample is rather diverse, all age groups are represented among trainers. It can also be claimed, however, that it is mainly the members of the young and middle-age groups who work in such jobs, the majority of the sample (207 people) is under 45 years of age. This can probably be attributed to a period of spread and dynamic growth of the fitness movement, to the fact that the number of gyms has not increased until the recent decade. In this period, an increasing number of trainers were needed, which was a motivating force in vocational trainings and career selection of young people. The representatives of older age groups come primarily from among those who work as physical education teachers, or who have left their previous sports career and changed for trainer career in the field of leisure-time sports.

The majority (63%) of trainers who filled in the questionnaire have been working in their jobs for over 3 years, 102 of which for over 5 years, and therefore it is probable that the respondent trainers have professional experience and had time to build their clientèle.

The sample is characterized by engagement via contracting agreement or in entrepreneur status, as well as by part-time employment, while only 37 respondents work in full time trainer jobs.

147 of the respondents answered that they work less than ten hours a week as fitness trainer. Most of them (161 people) hold only one type of training, 69 of them hold two types, and 30 people of the 261 respondents claimed that they hold more than 2 types of trainings. From among the inquired fitness trainers, 172 people have college or university degree, 52 people have only OKJ vocational qualification. In relation to the trainer job, OKJ vocational

qualification proved to be most frequent, as 212 people selected the corresponding response option, while only 38 people hold such college or university degree that is relevant to trainer profession. All the other trainers with qualification of higher education (134 people) graduated in other fields, and in addition obtained the OKJ vocational qualification required for trainer job. Consequently, from the aspect of education, all respondents have qualification required for trainer job as per the effective legal regulations, however only a few of them chose it as their main form of livelihood, they rather consider it as a supplementary activity, motivated by different aspects – love of sports, extra income.

Respondents of the Questionnaire for Fitness Consumers

753 guests attending to gyms responded to the questionnaire. 500 of them are women (66%) and 253 are men (34%). As the respondents of the questionnaire were people who do sports only in gyms under trainer control, it can be concluded that – as compared to men – women ask for the trainer's assistance in higher proportion if they do workout in fitness centers. I have no data indicating whether this proportion is similar in the case of gym attendees in reality, however – based on the experience – the proportion of women is higher in gyms, and at group training sessions in particular. The majority of group training sessions are organized for female visitors: aerobic, body shaping, nevertheless, female attendance is higher even at training sessions that are not expressly targeted at women (spinning, spine training).

As the next step in the analysis of socio-demographic data, I looked into the age composition of the group of people attending to gym. 86% of the respondents (647 people) are between 18 and 65 years of age, and most of them (252 people) belong to an age group of 18–25. The lowest number of responses (only eight) came from people over 65 years of age, while the sample includes 98 people under the age of 18.

It can therefore be concluded that the trainer-controlled training sessions offered by fitness service providers are more popular among the young and middle-aged groups – as compared to older people, or they probably offer less services that are targeted at older age groups. Services targeted at the old age group are hardly present the range of gym services, the target age group – as indicated by the ratios of the sample – is the age group of 18–25. Simultaneously with the “aging” of gyms, the age of attendees also gets higher, as those

who incorporate these training forms into their lives at an earlier age may go on attending the same training session at the age of 30–40.

Finally I looked into the education-, labor market- and financial status-related characteristics of the sample. According to these data, people with qualification of higher education are predominant among guest attending at trainers' sessions in gyms. 43% of the respondents (320 people) have college or university degree, and they are followed by those who minimally have general certificate of secondary education (225 people).

It should be noted that although 107 of the respondents have only primary school education, it is not surprising considering that fact that the sample contains approximately the same number of people who participate in ongoing secondary school education. The majority of the respondents (359 people) work in white-collar jobs, or they are students (292 people).

An overwhelming majority of the respondents (94%) consider their financial status average or even better. A total of 359 people answered that their financial status is average, 280 people answered that their financial status is slightly better than the average, and 70 people responded that their financial status is much better than the average. The sample almost completely lacks such people who consider their financial status worse than the average, only 44 people selected the this response option.

Following an overview of the socio-demographic characteristics of the sample, it can be concluded that women use such services of gyms that are provided by trainers in much higher number than men, and that the attendees of these training sessions typically have high qualification and average, or above-the-average financial status. Such groups of society that have lower qualifications and lower income, as well as those working in blue-collar jobs are virtually not represented in the sample. It is probable that the same figure reflects the composition of gym attendees.

4. KEY FINDINGS OF THE DISSERTATION

This chapter aims to present my key findings concluded on the basis of my research results in relation to my research objectives. The general objective of my research is to conclude a comprehensive study on the demand and supply side of the Hungarian fitness sector.

I attempted to process the available literature; to set up a coherent picture of fitness consumers on the basis of my own questionnaire survey; to study the aspects according to which consumers choose their gym; as well as to explore what influencing role fitness trainers have in these choices.

In the sample of trainers I attempted to assess what factors influence the attendance at a trainer's class, i.e. what makes a trainer successful in conducting classes. My aim was to define the key criteria of success of fitness clubs, as well as to map what conditions need to be met in order to reach out for a wider section of the population and increase their engagement in the fitness sector.

The fundamental hypothesis of my research is that *fitness service providers can significantly improve their competitiveness by relying on the study of the consumers' motivation, and exploration of the key aspects of gym choice, as well as by selecting the proper experts (trainers).*

The following findings have been established in relation to my objectives and hypotheses:

Objective 1: exploration of the training session attendance-related habits of consumers in the Hungarian fitness sector

H1: Training habits of fitness consumers differs from general populations physical activity. Based on the gym membership active lifestyle is presumable.

The results obtained through the study of training session attendance-related habits reflect, that the majority of fitness consumers responding to my questionnaire, i.e. 75% attend gym training sessions on a weekly basis. It is a significant difference as compared to the average population, 38% of which does sports with some regularity, but 62% never does any. The research focuses on the guests of fitness clubs, and therefore – based on the composition of the sample – regular participation in physical activities was considered probable. Consequently, I assume that those respondents who reported attendance at fitness training

sessions once or twice a month or more rarely, does some sports activity in other venues as well. *According to the results, hypothesis H1 is accepted.*

Objective 2: definition of the key driving factors motivating the fitness sector consumers to attend training sessions

H2: The key driving factors influencing the attendance at fitness training sessions are related to health preservation and physical appearance.

The research results confirm that statement of hypothesis H1 which claims that the most important motivators for attendance at gym training classes are the effort to preserve health and the desire for aesthetic physical appearance. *Based on the foregoing, hypothesis H2 is considered justified.*

In addition to the above, the preservation of mental health was also considered a driving force by the sample of my research, as mental recreation, spiritual replenishment and stress relief proved to be as important for the respondents as the motivators related bodily features.

The results obtained from the study on the key motivators among fitness consumers are shown in *Figure 3*.

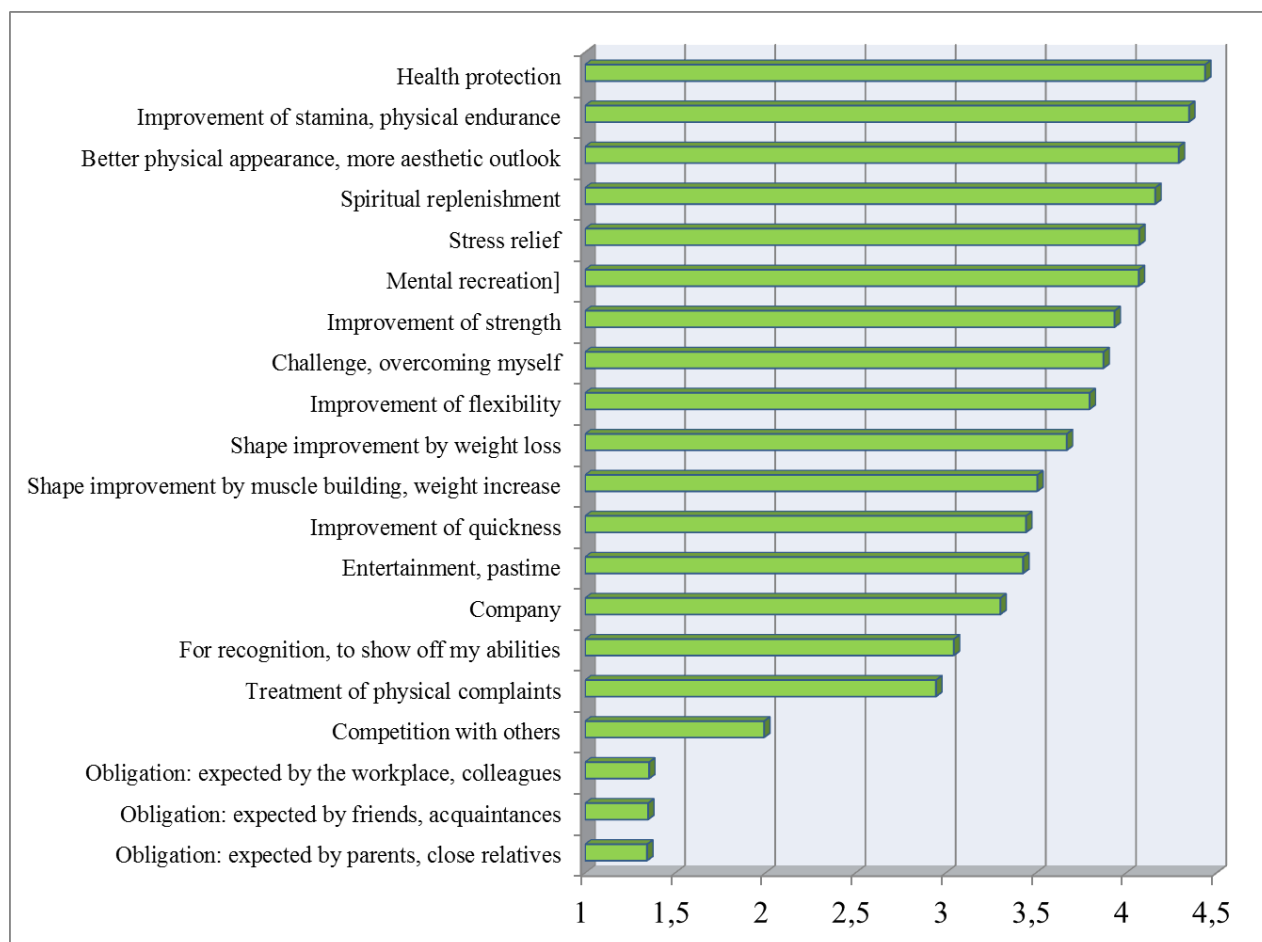


Figure 3: Key motivators of fitness consumers to attend training sessions

Source: Own research, 2017 (N=753)

I examined whether there was any difference between men and women in terms of what they considered key motivators for attendance at fitness training sessions.

Based on the results, it can be concluded that among fitness consumers included in the sample, women proved to consider body shaping and weight loss, better and more aesthetic physical appearance, as well as health preservation as much more significant driving factors. Additionally, as compared to men, women were more likely to be motivated by the urge to treat their physical complaints, to get mental recreation, spiritual replenishment and stress relief.

By contrast, shape improvement by muscle building, improvement of strength and quickness, and competition with others proved to be much more significant motivators for men. It is interesting that among men, obligation was attributed significantly higher value than any other driving force to attend fitness trainings, whether it be the result of expectation from the workplace, friends or acquaintances.

This can be linked to the concept arising from the traditional gender roles, according to which men are the breadwinners, the “stronger sex,” and therefore they can feel an inner urge to sustain good physical condition.

The segmentation of consumer groups according to key driving forces for training is considered an important outcome of my research. According to the priority ranking of motivators influencing training attendance, fitness consumers are arranged into four different clusters (*Table 2*). Those who consider sociocultural factors and appreciation as the key driving force are classified into the “*Sociable, active*” cluster. The members of the “*Sporty, muscled*” consider the improvement of their conditional skills and muscle growth as their main aim. The “*Healthy, fit*” group consists of people who are health-conscious, and attend trainings mainly to improve their health and get attractive appearance. And finally, those who attend gym in order to fulfill some kind of obligation, meet expectations or get external appreciation were classified into the “*Externally controlled*” cluster.

Table 2: Characteristics of consumer clusters formulated on the basis of motivations

Variable		Cluster				Sig.
		1	2	3	4	
No	female	67%	53%	77%	50%	p<0.001
	male	33%	47%	23%	50%	
Age		Older*	Younger*	Older*	Younger*	0,002
Financial status		Better*	Worse*	Average*	Worse*	0,200
Frequency of training		Frequent*	Rare*	Average*	Rare*	0,008

*in comparison with the population

Source: Edited by the author, 2017

Objective 3: to map what aspects gym visitors take into consideration when choosing sports facility for training

H3: *In addition to the tangible conditions, the selection among fitness facilities is mostly influenced by the staff, and by the trainers themselves in particular.*

Results reflect that tangible environment (mainly equipment and cleanliness) has the strongest influence on the gym choice of fitness sector consumers (*Figure 4*). Apart from these the quality of basic services, as well as staff-related aspects (trainer, good community, atmosphere) played the most important role in their choice. This confirms hypothesis H3, however it shall be added, that the significance of the quality of basic services, price and location is also emphasized. *According to the results, hypothesis H3 is accepted.*

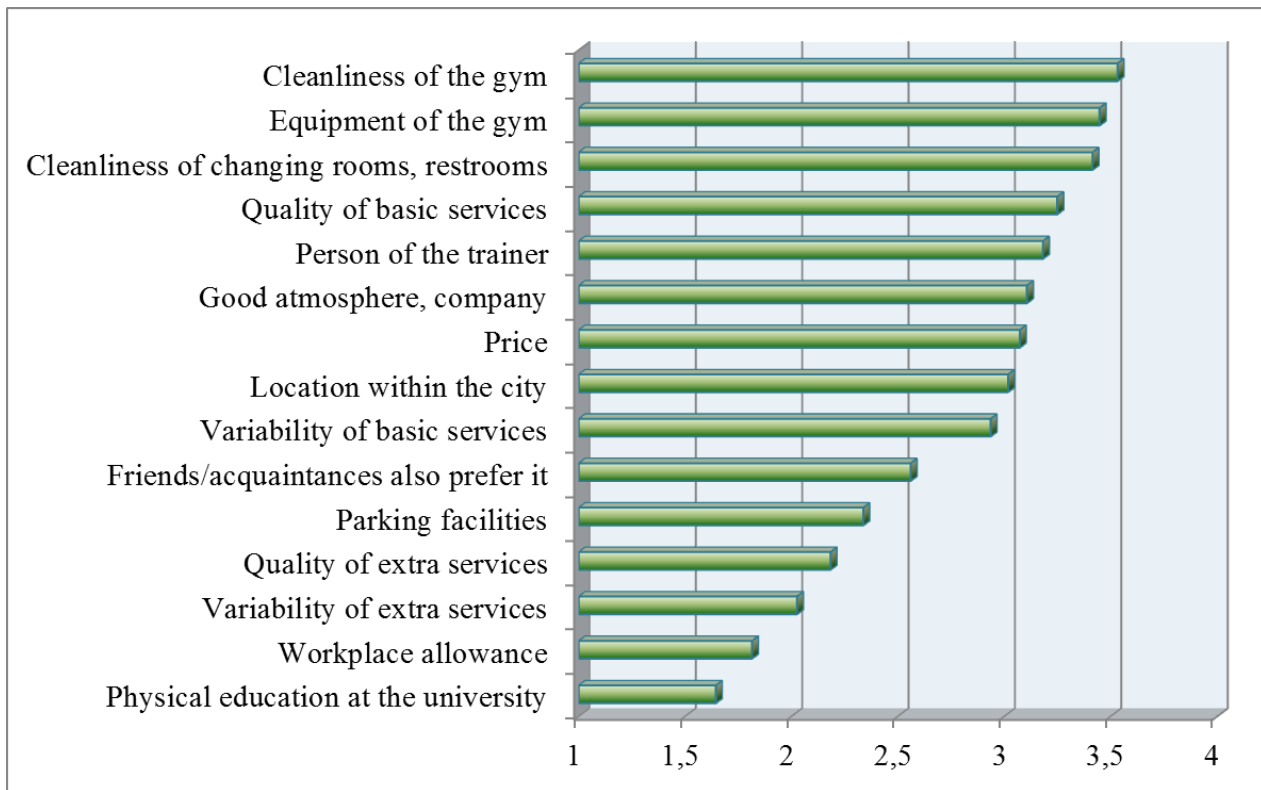


Figure 4: Aspects of the selection of fitness facility

Source: Own research, 2017 (N=753)

I looked into the factors influencing gym choice also in terms whether there is difference between the priority order of the sexes. Although the order was similar to that of the complete sample, in five cases there were significant differences between men and women. As compared to women, friends and acquaintances has significantly larger importance in the gym choice of men. In contrast, women attributed more value to the personality of the trainer, the cleanliness of the gym and the changing rooms, restrooms, as well as to the location of the fitness club.

The fact that men consider friends and acquaintances a more important factor corresponds to the results of the motivation study, according to which men are remarkably more motivated to attend gym by the expectations of friends and acquaintances. It is also possible that due to this fact, the location of the gym is less important.

Thereafter, consumers were segmented also in line with the aspects of facility choice. As a result of the cluster analysis, five consumer groups were formed (*Table 3*). The cluster

whose members choose the venue for their training according to such characteristics of the gym that are linked to their workplace (location, discount) was named “Active worker”. Those who chose facility on the basis of recreational facilities offered by extra services were classified into the “Active recreation” group. The “Sociable active” cluster includes sportspeople whose choice was highly influenced by socio-cultural factors and community-related aspects in addition to workplace-related attributes. Fitness consumers for whom price was the decisive factor in their fitness club choice were categorized into the “Active economical” cluster. And at last, the cluster, which puts emphasis on all of the key features of the gym, on the tangible environment as well as on the services was named “Demanding consumers.”

Table 3: Characteristics of consumer clusters formulated on the basis of aspects of gym choice

Variable		Cluster					Sig.
		1	2	3	4	5	
No	female	79%	65%	61%	66%	56%	p<0.001
	male	21%	35%	39%	34%	44%	
Age		Older*	Older*	Average*	Older*	Younger*	p<0.001
Financial status		Average*	Better*	Average*	Average*	Worse*	0,008
Frequency of training		Average*	Rare*	Frequent*	Frequent*	Rare*	0,003

*in comparison with the population

Source: Own research, 2017 (N=753)

Results, therefore, reflect that gym consumers are arranged into articulate consumer groups according to their key motivators, as well as the aspects influencing their gym choice.

Objective 4: to analyze the sample of trainers on the basis of the Myers–Briggs personality types

H4: *From among the Myers – Briggs personality types, extraverted type is more common among trainers than introverted type.*

The hypothesis was justified during the study of the sample, based on the test results conducted by using the Myers - Briggs temperament index, 80% of the respondent trainers belong to the group of extraverted preference. When comparing the complex personality types, extraverted, sensing, thinking and judging types represented a significant proportion

among trainers, out of the sixteen different types, 22% of the respondents belonged to this particular type, and therefore it can be assumed that the tested personality preferences influence the choice of trainer career. *These results clearly justify hypothesis H4.*

Figure 5 clearly presents that extraversion vs. introversion, as well as judging vs. perceiving preference pairs proved to show the largest difference. Accordingly, 80% of the trainers in the sample (209 people) are extraverted, and only 52 of them are introverted.

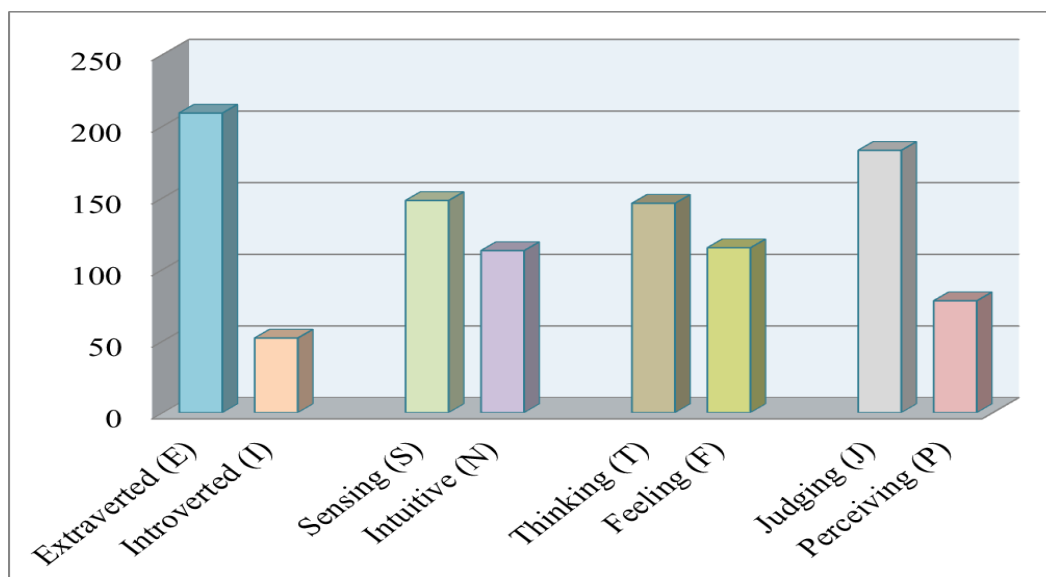


Figure 5: Myers' personality preferences in the sample of trainers

Source: Own research, 2017 (N=261)

According to the Myers - Briggs Temperament Index, extraverted – sensing – thinking – judging (ESTJ) type proved to be the most common within the sample of trainers (*Figure 6*).

People with extraverted attitude are characterized by activity, intense relationship with the environment, good communication skills, open approach to the external world, interest in others. When comparing the attitudes characterizing the extraverted personality with the features attributed to introverted people in public sense – the latter are shier, reserved, they prefer solitude to company – the resulting outcome perfectly matches the previously specified expectations pertaining to trainers. In terms of Myers' system, for 183 people (70%) judging is the preferred lifestyle, while for 78 people (30%) it is perceiving. This remarkable difference is interesting, however in the case of attitude characterizing the judging type of people it can also be explained in relation to the sample of fitness trainers, especially when the groups are refined by linking the other dimension – thinking - feeling

function – to it. In general, judging type of people are methodical, confident, quick, and they are likely to make decision once they have obtained adequate information. The difference was not so remarkable in the case of perceiving and decision making preferences, however a minor distinction can be detected here as well. 148 trainers (57%) belong to the perceiving type, and 113 (43%) to the intuitive type, and in terms of decision making, 146 people (56%) are thinking, and 115 people (44%) are feeling.

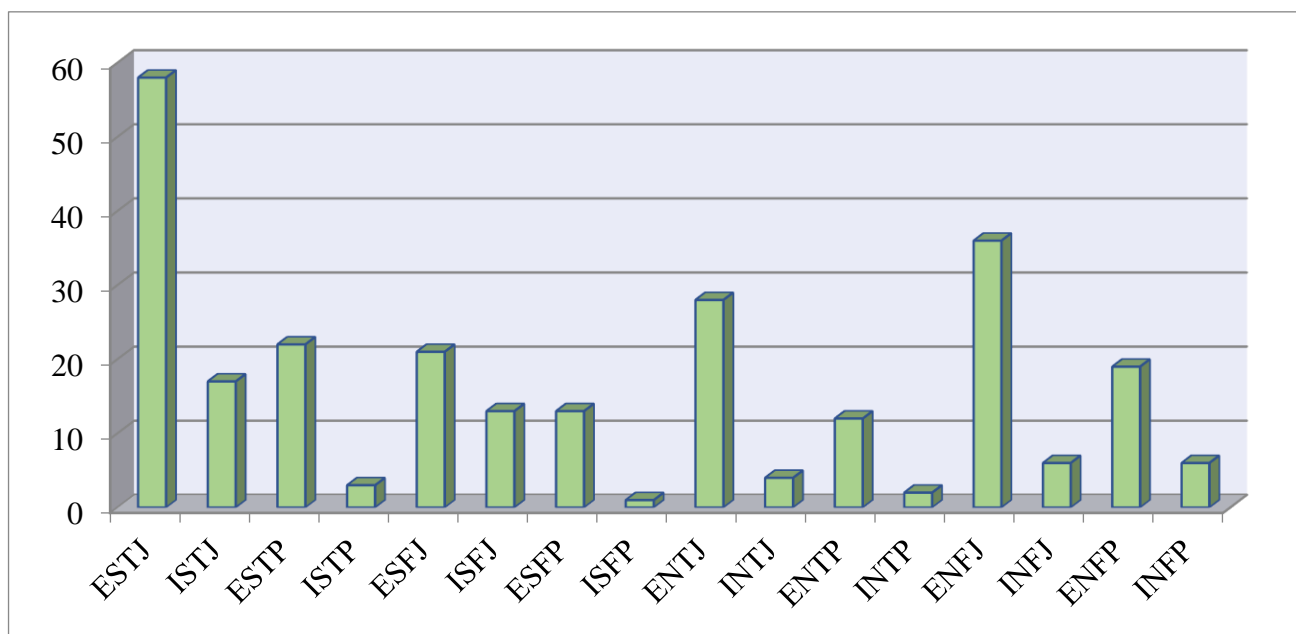


Figure 6: Distribution of the sample of trainers according to the 16 basic types of MBTI

Source: Own research, 2017 (N=261)

Objective 5: to study what personality traits the attendees of fitness training sessions attribute to their trainers

H5: *The personality of the trainer (extraverted/introverted) is an influencing factor in the choice of extraverted and introverted types of sportspeople. I assume – in the case of introverted people in particular – that they prefer to opt for introverted trainers.*

The expectations of the fitness consumers in connection with personality preferences matched the results of the sample of trainers, and therefore it can be concluded that the demand and supply sides in terms of personality of fitness trainers are well aligned.

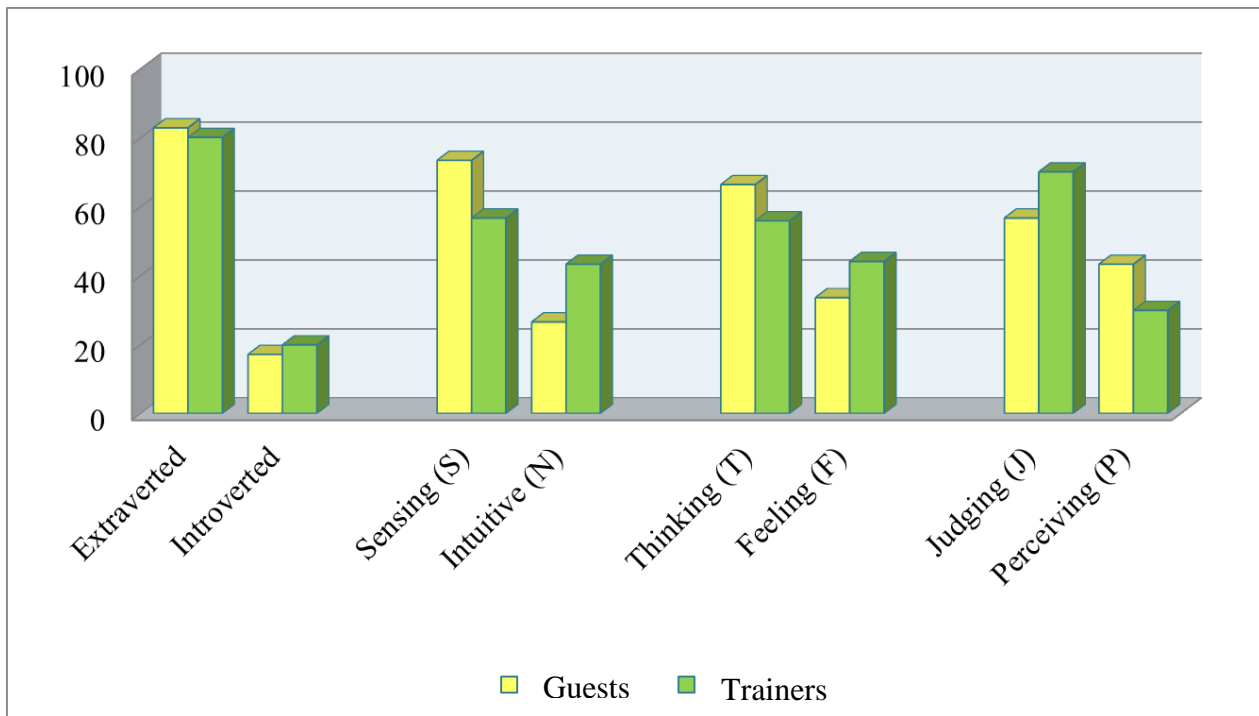


Figure 7: The composition of the sample of fitness trainers according to the evaluation of consumers and the personality of trainers

Source: Own research, 2017 (N=753)

The Myers' personality type of a trainer truly influence the trainer choice of sportspeople. A significant relationship – as concluded by my research – proves that extraverted type of fitness consumers choose extraverted trainers, while introverted type of consumers rather opt for introverted trainers. *Hypothesis H5 is therefore considered justified.*

On the other hand, the second part of the hypothesis – according to which this aspect is important for the introverted people – shall be modified by adding that not only the introverted people, but also the consumers with extroverted preferences consider this aspect important. From among the other preference dichotomies, sensing–intuition dimensions were also determinant in this aspect. Tendencies reflect that sensing type of sportspeople opt for sensing trainers, while intuitive sportspeople opt for intuitive type of trainers. There was no difference detected in thinking vs. feeling and judging vs. perceiving preferences.

Finally, I also investigated whether the personality of the trainer has any influence on how important the person of the trainer is when choosing the gym. There was only one dimension that proved to have significant connection with this issue: extraversion. Based on the foregoing, it can be concluded that if sportspeople regard their trainer extraverted – i.e. open

and friendly –, they will rank the person of the trainer higher among the aspects of facility choice.

Objective 6: to specify what factors, features influence the attendance at the classes conducted by trainers

The fitness sector is highly competitive, and therefore, from economic aspects, profit is of utmost importance for fitness clubs. A major part of the profit comes from the income generated by the group training sessions conducted by trainers. The more popular the group sessions of a trainer are, the more it is worth for the gym to employ the specific expert.

H6: I assume that the training sessions of trainers of extraverted type have higher attendance than sessions held by trainers with introverted personality.

This hypothesis was not justified by the research results. When compared, neither the complex personality types, nor the preference dichotomies showed significant difference in the number of attendees at the classes of extraverted and introverted trainers. The same was concluded when reviewing the other preference pairs. It can be assumed that profession-related requirements and the effort to meet the expectations of guests have stronger influence on the trainers' behaviour than their personality type. *For this reason, hypothesis H6 is rejected.*

Results reflect that assuming certain forms of self-improvement (attendance at other trainer's classes), reading professional books, and obtaining the highest possible qualification related to the trainer job are in connection with the number of attendees at the classes of the specific trainer.

In terms of class attendance, there was no significant difference between the sexes, so it cannot be concluded that men or women are more successful. In terms of age, however, there was a remarkable difference between the various age groups, which reflected that the classes of older trainers are attended by more people as compared to younger trainers. It can be attributed to the fact that older trainers have been engaged in networking and clientèle building for longer than younger ones. It can also be influenced by the concept of the fitness consumers that an older expert has more experience and broader knowledge, and therefore they trust their skills more. Finally it shall be noted that if an older trainer is in

in good physical condition in spite of her/his age, and has attractive appearance, s/he can inspire her/his guests as a role model to follow.

My research results confirm the assumption that engaging proper sports experts is an important factor for the success of gyms. The personality, qualification and professional skills of trainers working in a gym are fundamental, as these aspects have effect on the gym choice of consumers and on the attendance at group classes, which generate a major part of the income of gyms. Additionally, the results also call attention to the fact that the person of the trainer can essentially influence the gym choice of consumers, consequently well selected staff can create significant competitive advantage for gyms.

MY research covers the study of spending habits of fitness consumers. Results reflect that the majority of fitness consumers in the sample (42%) spend a monthly amount of approx. HUF 6000–12000 on visiting the gym. 11% of them pay HUF 12000–20000 each month, while 7% spends even more. It can be concluded that over half of the respondent spend more than HUF 6000 on gym. 31% pay less, while 9% does not pay for it. 39 people of the latter group work in the specific gym, and 29 of them have their gym-based sporting activity funded by sports associations. Accordingly, the majority of guests spend an amount between HUF 6000 and 12000 on monthly gym pass.

I also examined what factors would make fitness consumers spend more money on their attendance at training sessions.

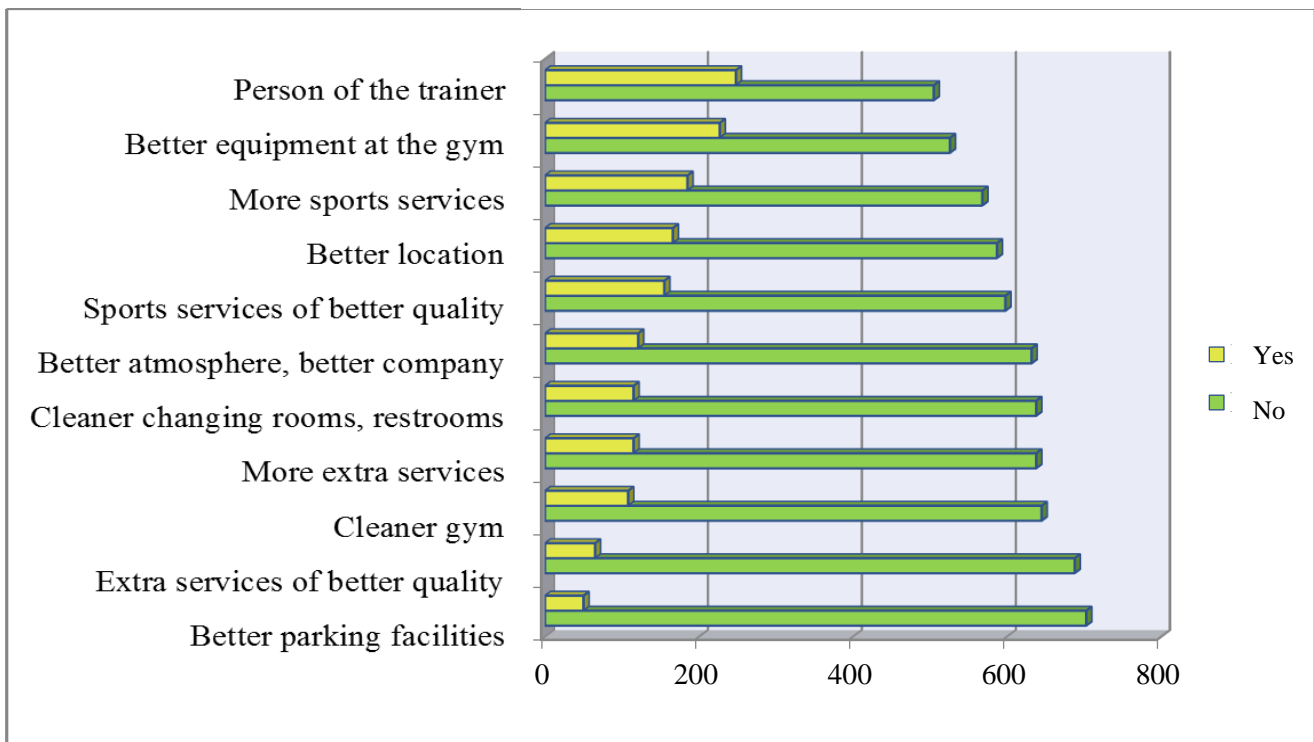


Figure 8: What factors would make consumers willing to pay more for fitness services?

Source: Own research, 2017 (N=753)

The majority of the respondent consumers would not pay more than they pay now for fitness services. Those willing to pay higher price would spend more because of the person of the trainer. 505 people of the sample would not pay for this purpose, but 248 would. The second most important aspect was the equipment of the gym, for which 227 consumers would pay more. 185 people would pay more if the gym offered a wider range of sports services, 166 people would pay for better location, 155 for services of better quality, 121 for better atmosphere, better company, 115 for cleaner changing rooms, restrooms and more extra services, 108 people would pay for cleaner gym. The smallest number of people would pay higher prices for better quality extra services (65 people) and for better parking facilities (50 people).

This order suggests that if a fitness club intended to offer its services on higher prices, it could achieve it primarily by engaging proper trainers, as well as by providing good equipment, diverse programs and classes.

Finally I also mapped what is the amount consumers would be willing to pay more for fitness services. 195 of the 753 respondents (26%) would not at all pay more than the current amount for visiting the gym, and 154 people, i.e. 20% would pay at most HUF 1000 more. 270 people (36%) claimed that they would pay HUF 1000–3000 more for more beneficial

conditions, 99 people (13%) would spend HUF 3000–6000 more, and 35 people (5%) would be willing to exceed this amount.

I think my research results support my fundamental hypothesis that the competitiveness of gyms could be improved by taking the consumers' motivation and aspects of facility choice into consideration, as well as by creating the proper staff-related conditions.

5. NEW AND NOVEL RESULTS OF THE DISSERTATION

There is a highly limited volume of fitness sector-related literature available in Hungary. The novelty of my paper stands in the research into the key stakeholders of the fitness segment – trainers conducting group classes, and the sportspeople attending these classes – , as there has been no study performed in this field in Hungary so far. This chapter will summarize the new and novel results of my essay.

- Based on my secondary researches, I created a model which presents the position of fitness trainings within the group of physical activities, and I also categorized the typical training forms of the fitness sector according to their content and equipment demand.
- The novel results of my primary research include the conclusion that factors connected to mental health – such as mental recreation, spiritual replenishment and stress relief – are also considered highly important motivators of sportspeople attending fitness trainings, in addition to health preservation and achievement of aesthetic physical appearance.
- The personality test of trainers working in the fitness sector that was conducted according to the Myers-Briggs Temperament Index is considered a new result of my research. The results reflect that the great majority of trainers in the sample belong to extraverted, sensing, thinking and judging personality type. In terms of extraversion vs. introversion, there was also a remarkable difference in the sample: 80% of the respondent trainers proved to have extraverted attitude.
- I also looked into the interrelation between the Myers' personality type of fitness trainers and consumers, and according to my results, it is not only trainer choice of the consumers that is influenced by the preferences, but also the extent to which the person of the trainer is taken into consideration in the gym choice of sportspeople.
- During motivation-related studies, it was concluded that fitness consumers could be classified into the following groups: *Sociable active*; *Sporty, muscled*; *Healthy, fit* and *Externally controlled* cluster. These clusters were described on the basis of their composition and fitness training-related activity.

- Fitness consumers can also be segmented based on their aspects of facility choice, and they can be classified into five cluster accordingly: *Active worker*; *Active recreation*; *Sociable active*; *Active economical*; *Demanding guest*, which were also described along their key characteristics and training attendance habits.

6. PRACTICAL UTILIZABILITY OF THE RESULTS

My dissertation analyzes the supply and demand sides of the fitness sector by examining the trainers conducting group training sessions and the consumers attending the trainings. Based on my results, for the purpose of providing long-term success for fitness clubs, and increasing the number of attendees at fitness trainings, I have formulated the following recommendations:

1. The operator, owner of the fitness club shall always keep the target audience in focus, and create their supply profile accordingly, on the basis of the motivating factors characteristic to the specific group, and the key expectations against the facility.
2. It is essential that the fitness service providers are aware of the target group's training habits, expectations, price sensitivity and willingness to spend, in order to adjust the services and conditions offered by the supply side to the expectations of the demand side, and to make the profitable operation of the fitness club sustainable on the long-run.
3. It is advisable to gather information on the age characteristics, lifestyle and preferences of the surrounding residents even before opening the gym.
4. It is reasonable to open gym in the vicinity of workplaces with large number of employers, even if it intends to offer basic services only.
5. Hygiene is always an essential criterion for the success of a gym, as it is a part of health-conscious mindset, and therefore it is considered a fundamental condition by the majority of consumers.
6. Settlement type is also a decisive factor in the priority order of aspects influencing success, because while location and parking facilities are considered crucial issues in a city, in smaller settlements these aspects have smaller significance.
7. Tests related to the personality of trainers reflect that it is advisable for a fitness service provider to engage extraverted trainers, considering the fact that the person of an extraverted trainer plays a larger role in the facility choice of consumers. Personality preference, on the other hand, has no influence on class attendance, however introverted fitness trainers are also needed in order to provide diverse services (different types of class) and retain introverted consumers.
8. For the purpose of maintaining the diversity of the range of

services, it is not necessary to discontinue classes with lower attendance, it shall rather be assessed how these classes could be made more attractive to consumers.

9. Fitness clubs are advised to gather comprehensive information on the professional skills, qualifications of trainers, and perhaps support the ongoing training of their experts to achieve higher class attendance and long-term success. Gyms can include the professional introduction of trainers in their marketing activity.

10. Additionally, in order to persuade consumers, service providers are also advised to highlight such features of the gym operation that have the largest influence on the facility choice of consumers according to the research.

7. PUBLICATIONS RELEASED IN THE TOPIC OF THE DISSERTATION



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Subject: PhD Publikációs Lista

Candidate: Éva Judit Bartha
Neptun ID: DVOPBW
Doctoral School: Károly Ihrig Doctoral School of Management and Business
MTMT: 10052156

List of publications related to the dissertation

Articles, studies (5)

1. **Bartha, É. J.**, Kun, A. I.: Az önértékelés és a teljesítmény kapcsolata a szabadidősportban.
Magyar Sporttudományi Szemle 18 (69), 10-17, 2017. ISSN: 1586-5428.
2. **Bartha, É. J.**: A fitnessz ipar gazdasági és társadalmi jelentősége.
In: Sokszínű sporttudomány. Szerk.: Szmodis Márta, Szóts Gábor, Magyar Sporttudományi Társaság, Budapest, 24-35, 2016, (Magyar sporttudományi füzetek, ISSN 2062-9559 ; 14.)
ISBN: 9786155187100
3. **Bartha, É. J.**: A kommunikációs stílus szerepe az edzői munka hatékonyságában.
Taylor 8 (2), 87-94, 2016. ISSN: 2064-4361.
4. **Bartha, É. J.**: Szakmai kompetenciák és képzettség szerepe az edzői munka hatékonyságában.
Taylor 8 (4), 35-44, 2016. ISSN: 2064-4361.
5. **Bartha, É. J.**, Perényi, S.: Communication of trainers as one of the means for customer retention in fitness clubs.
Apstract 9 (1-2), 35-40, 2015. ISSN: 1789-221X.
DOI: <http://dx.doi.org/10.19041/APSTRACT/2015/1-2/7>





List of other publications

Articles, studies (1)

6. **Bartha, É. J.**: Sport, vallás, hagyomány.
Ethnica 15 (1), 18-19, 2013. ISSN: 1419-8177.

Conference presentations (1)

7. Perényi, S., **Bartha, É. J.**, Lenténé Puskás, A., Kozma, G., Bács, Z.: Sport a nonprofit társadalmi térben: A sporttal foglalkozó nonprofit szervezetek gazdasági mutatóinak összehasonlító vizsgálata.
Magyar Sporttudományi Szemle 17 (66), 52, 2016. ISSN: 1586-5428.

The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of Web of Science, Scopus and Journal Citation Report (Impact Factor) databases.

07 May, 2018

